

STD Surveillance Tips

Tips on select STD surveillance topics address frequently asked questions from STD program staff working in state, local, and territorial public health agencies.

Note: Previous versions of the STD Surveillance Tips were e-mailed to STD programs via the monthly STD Surveillance and Data Science Updates from CDC's Division of STD Prevention (DSTDP). The content on this website includes minor edits to the original content.

General and Miscellaneous STD Surveillance Tips

Identifying cases of chancroid is challenging, so all reported cases should be double-checked before data closeout to ensure they meet the current Council of State and Territorial Epidemiologists (CSTE) case definition.

Want to know more?

Chancroid is a sexually transmitted genital ulcer disease caused by infection with *Haemophilus ducreyi*, a fastidious, gram-negative bacillus. Chancroid has been a nationally notifiable condition since 1944, and national trends are influenced by changes in diagnostic capacity and case definitions. Currently, polymerase chain reaction (PCR) is the gold standard for chancroid diagnostic testing in the United States, but because no molecular assays have been cleared by the Food and Drug Administration for use in the United States, PCR is infrequently used. Diagnosis should be based on physical findings if culture media for *H. ducreyi* are unavailable. Clinical presentation of chancroid is very similar to other genital ulcerative infections like herpes and syphilis. The combination of limited use of PCR and the difficulty differentiating it from other ulcerative diseases makes clinical diagnosis of chancroid challenging.

During a recent evaluation of chancroid reporting via the National Notifiable Diseases Surveillance System (NNDSS), a CDC Epidemic Intelligence Service officer working with partners in state health departments discovered that none of six cases initially reported for 2020 met the CSTE chancroid case definition. All six cases were removed prior to 2020 NNDSS data closeout, so ultimately, there were no cases of chancroid reported nationally in 2020. As of August 2022, eight chancroid cases have been reported for 2021 through NNDSS and five cases have been reported for 2022. Extra scrutiny of these few cases identified in 2021 and 2022 cases may reveal similar issues requiring removal prior to data close out.

Even more?

Read the current case definition for chancroid (*Haemophilus ducreyi*): <https://ndc.services.cdc.gov/case-definitions/chancroid-1996/>.

Need help?

Email CDC STD Surveillance SMEs at STD_Surv_Inquiry@cdc.gov.

Tip originally e-mailed via the STD Surveillance and Data Science Updates on September 8, 2022.

National Notifiable Diseases Surveillance System (NNDSS) reconciliation is the process to finalize case counts for the previous *MMWR* year to maximize agreement between a reporting jurisdiction's database and CDC's NNDSS database.

Want to know more?

Final case counts from the NNDSS reconciliation process are published in CDC's [annual STD surveillance report](#) and used for [NCHHSTP AtlasPlus](#). While CDC's Center for Surveillance, Epidemiology, and Laboratory Services (CSELS) leads the reconciliation process for all nationally notifiable conditions, CDC's Division of STD Prevention (DSTDP) collaborates with CSELS to reconcile STD data. In addition to CSELS' reconciliation guidance packets, DSTDP emails specific STD data quality reports to jurisdictions to help improve surveillance data prior to finalizing case counts. While CSELS coordinates approval of final case counts for other conditions (e.g., arboviral, rabies), DSTDP sends sign-off letters via e-mail with final case counts to the jurisdictions' STD Program Manager and State Epidemiologist to approve via signatures.

Even more?

To aid in the reconciliation process, we encourage all state, local, and territorial health department staff who need to verify STD case counts or download line lists of STD cases to get access to the [Message Validation, Processing, & Provisioning System \(MVPS\) portal](#). In-depth instructions on MVPS portal use have been available since August 10, 2021. See the NNDSS eSHARE [webinar](#) and [PowerPoint presentation](#). If you do not already have MVPS portal access, please request access from the NNDSS Data Manager in your jurisdiction. If you do not know who the NNDSS Data Manager is in your jurisdiction, please send an e-mail inquiry to edx@cdc.gov. Your jurisdiction's NNDSS Data Manager will initiate the request to grant MVPS access and assign user permissions and access to conditions in MVPS. The MVPS portal also hosts a "reconciliation" landing page that provides an overview of the process and other supporting documentation.

Need help?

Email CDC STD Surveillance SMEs at STD_Surv_Inquiry@cdc.gov.

Tip originally e-mailed via the STD Surveillance and Data Science Updates on July 29, 2022.

Electronic case reporting (eCR) provides more complete case data than Electronic Laboratory Reporting (ELR) alone.

Want to know more?

Electronic Case Reporting is the automated generation of case reports of reportable conditions from electronic health records (EHRs) to be reported to public health agencies. CDC's Division of STD Prevention (DSTDP) has developed two different approaches of eCR for chlamydia and gonorrhea.

In one approach, the healthcare provider initiates reporting when the case definition for chlamydia or gonorrhea is met in the EHR. The other approach is for the public health agency to leverage ELRs reported to

them to directly query the EHR of the clinical site where the patient was seen and extract additional case-relevant data.

Both approaches that also use eCR were found to report more complete data when compared to using ELR alone.

Even more?

More information on these resources can be found on this [website](#) which includes a toolkit that details the guidance and necessary logic to implement both approaches of eCR: the [triggering of eCRs from EHRs](#), and [leveraging ELRs to extract information from EHRs](#).

We piloted the automated [triggering of eCRs from EHRs](#) with the states of [Oregon](#) and [Illinois](#) and select clinics within their respective jurisdictions. We conducted a study of approach that [leveraged ELRs to extract information from EHRs](#) at the Medical University of South Carolina.

Need help?

Email CDC STD Surveillance SMEs at STD_Surv_Inquiry@cdc.gov.

Tip originally e-mailed via the STD Surveillance and Data Science Updates on June 24, 2022.

Rates of reported cases of STDs can be calculated per 100,000 persons for seven race and ethnicity categories using annual population estimates from the US Census.

Want to know more?

Cases of reportable STDs can be grouped into the seven race and Hispanic ethnicity categories: Hispanic, American Indian/Alaska Native, Asian, Black/African American, Native Hawaiian/Pacific Islander, White, and Multiracial. These categories align with the state-level and county-level population estimates available from the US Census. The 2019 [“Population and Housing Unit Estimates”](#) provides links to many Census data sets and their documentation files. These are publicly available and can be used to calculate rates for each race and Hispanic ethnicity category.

Population estimates from the last decennial census to the current year are updated annually; however, updates can be delayed; because of this, national surveillance rates are typically calculated using a one-year lag in population (e.g., 2020 case rates are calculated using 2019 population denominators). We expect updated 2020 population estimates stratified by state, sex, age, and race and Hispanic ethnicity, based on the 2020 census, will become available in the future.

Even more?

For state-level population estimates, use the file SC-EST219-ALLDATA6, under the link [State Population by Characteristics: 2010-2019 \(census.gov\)](#). Data sets for earlier years can be found at <https://www2.census.gov/programs-surveys/popest/datasets/>. Race and ethnicity data are also available at

the county-level from the file CC-EST2019-ALLDATA, posted under [County Population by Characteristics: 2010-2019 \(census.gov\)](#).

Need help?

Email CDC STD Surveillance SMEs at STD_Surv_Inquiry@cdc.gov.

Tip originally e-mailed via the STD Surveillance and Data Science Updates on May 24, 2022.

Chlamydia Surveillance Tips

Beginning in 2022, chlamydia case notifications provided to CDC must have a case classification of “confirmed” in order to be counted in national reporting.

Want to know more?

All case notifications sent to CDC’s Nationally Notifiable Disease Surveillance System (NNDSS) must specify a case classification that corresponds to the Council of State and Territorial Epidemiologists (CSTE) [case definitions](#). Case classification status (confirmed, probable, possible, suspect, unknown, not a case) is factored into a condition’s print criteria, the standards upon which CDC can publish cases in national reporting. Therefore, case classification can help determine if a reported case is counted in CDC publications such as [MMWR’s Weekly and Annual Tables](#), [STD Surveillance Reports](#), [NCHHSTP AtlasPlus](#), and [NNDSS WONDER Tables](#).

Historically, reported cases of nationally notifiable STDs (chlamydia, gonorrhea, syphilis, and chancroid) had an “All Report” print criteria, meaning that all cases reported to CDC, regardless of reported case classification, were included for publication. However, the [CSTE Position Statement](#) on which the revised [2022 chlamydia surveillance case definition](#) is based, specifies that only chlamydia cases reported with a “confirmed” case classification will be included in national reporting beginning *MMWR* Week 1 of 2022.

Even more?

Read the updated Guidance: <https://www.cdc.gov/std/program/forms/guidance-on-reporting-case-classification-status-for-std-case-notifications.pdf>.

Need help?

Email CDC STD Surveillance SMEs at STD_Surv_Inquiry@cdc.gov.

Tip originally e-mailed via the STD Surveillance and Data Science Updates on January 25, 2022.

Syphilis Surveillance Tips

Syphilis record search and review algorithm is now available on GitHub.

Want to know more?

Recently, CDC's Division of STD Prevention (DSTDP) collaborated with Florida Department of Health and New York City Department of Health and Mental Hygiene to develop a computational algorithm to prioritize syphilis serologies for further investigation by health departments.

Traditionally, reported serologies are prioritized for investigations based on local epidemiology and capacity, utilizing the nontreponemal test titer, age, and, in some instances, gender as criteria for the "reactor grid." These prioritized serologies further undergo manual record search and review, which can be resource intensive. However, "reactor grids" are widely acknowledged to be unreliable and prior studies have demonstrated that many potential cases were missed. The proposed algorithm significantly increased the accuracy (99.4% sensitive), and the automated process would replace the manual work and divert those resources for investigating the prioritized serologies.

This algorithm is now available on GitHub as a Python script in a Jupyter Notebook. The [GitHub page](#) contains detailed descriptions and instructions on how to test the algorithm. Jurisdictions can test the algorithm on their dataset.

Even more?

A [manuscript describing this algorithm](#) can be found in the journal *Sexually Transmitted Diseases*. The National Coalition of STD Directors held a webinar to describe this approach, entitled 'Should your jurisdiction automate a syphilis record search process? Yes!'. The recording of the webinar along with the slide deck can be found in the link above.

Need help?

Please contact Dr. Saugat Karki (skarki@cdc.gov) in DSTDP for any questions or assistance.

Tip originally e-mailed via the STD Surveillance and Data Science Updates on March 29, 2022.

Congenital Syphilis Surveillance Tips

Infant nontreponemal (e.g., RPR) titers are monitored as part of congenital syphilis case follow-up. A decline in titer following appropriate treatment for congenital syphilis is likely a sign that the infant is responding well to therapy; however, decreases in infant titers should not affect if a treated infant should be reported as a case of congenital syphilis.

Want to know more?

Syphilis is a bacterial infection, which means after appropriate penicillin treatment, evidence of an active infection should disappear. When an infant's titers begin to decline following appropriate penicillin treatment for congenital syphilis, this is a sign that the infant's markers of inflammation are disappearing, and the active syphilis infection is waning. Stable or increasing titers following appropriate treatment suggests the need for additional clinical evaluation of the infant. (See [2021 STI Treatment Guidelines](#)) Although other perinatal infections, such as HIV, may require follow-up labs (e.g., at 18 months) to look for evidence of an 'established' infection, the [Council of State and Territorial Epidemiologists case definition for congenital syphilis](#) does not consider changes in an infant's nontreponemal titers when determining if an infant should be reportable as a case of congenital syphilis. Surveillance case identification for congenital syphilis is based on adequacy of maternal treatment and congenital syphilis related signs/symptoms in an infant born to a person with syphilis.

Even more?

Watch the [Congenital Syphilis Case Classification webinar](#).

Need help?

Email CDC STD Surveillance SMEs at STD_Surv_Inquiry@cdc.gov.

Tip originally e-mailed via the STD Surveillance and Data Science Updates on December 15, 2021.

When investigating infants with possible congenital syphilis (CS), it's important to remember that not all jaundice in newborns is related to CS. CS-related jaundice—or 'jaundice due to syphilitic hepatitis'—can be identified in a baby's medical chart by looking for keywords such as 'conjugated hyperbilirubinemia,' 'direct hyperbilirubinemia,' or 'd.bili.'

Want to know more?

Jaundice—the medical term for the yellowing of skin and eyes—is relatively common in newborn babies. Jaundice is caused by high levels of the molecule, bilirubin, a red-orange pigment that is released when red blood cells break down in our bodies. Jaundice occurs for a variety of reasons. Sometimes jaundice can be a sign of CS, but only certain types of jaundice are associated with syphilitic infections. CS-related jaundice occurs when a particular type of bilirubin, known as conjugated—or direct—bilirubin builds up in the body

due to inflammation of the liver from a syphilitic infection. This can also be referred to as 'jaundice due to syphilitic hepatitis.' Finding CS-related jaundice in a baby with a reactive nontreponemal test (e.g., RPR+) meets the definition of a reportable case of CS.

Even more?

Watch the [Congenital Syphilis Chart Abstraction webinar](#).

Need help?

Email CDC STD Surveillance SMEs at STD_Surv_Inquiry@cdc.gov.

Tip originally e-mailed via the STD Surveillance and Data Science Updates on November 10, 2021.